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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,957	08/09/2001	Lise Wiseman	12587-008001	5383

26212 7590 06/28/2005

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EXAMINER	
ZHEN, LI B	
ART UNIT	**PAPER NUMBER**
2194	

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/927,957	WISEMAN ET AL.	
	Examiner	Art Unit	
	Li B. Zhen	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 – 48 are pending in the current application.

Response to Arguments

2. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. **Claims 1 – 48 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

5. Claims 1 – 27 are directed to method steps which can be practiced mentally in conjunction with pen and paper, therefore they are directed to non-statutory subject matter. Specifically, as claimed, it is uncertain what performs each of the claimed method steps. Moreover, each of the claimed steps, inter alia, providing, using, publishing, subscribing, receiving, and, can be practiced mentally in conjunctions with pen and paper. The claimed steps do not define a machine or computer implemented process [see MPEP 2106]. Therefore, the claimed invention is directed to non-statutory subject matter. (The examiner suggests applicant to change "method" to "computer

implemented method" in the preamble to overcome the outstanding 35 U.S.C. 101 rejection).

6. Claims 28 – 37 recite a system comprising process models, shared object models, transformer classes and controller classes. The models are considered as abstract ideas and the classes are considered as software. The system of claims 28 – 37 does not define any specific hardware. Therefore, the system is not tangible embodied in a manner so as to be executable.

7. Claims 38 – 48 are not limited to tangible embodiments. As recited in claim 38, the medium is not limited to tangible embodiments, instead being defined as including both tangible embodiments (e.g., "tangible medium", line 1) and intangible embodiments (e.g., "propagated signal", lines 1 - 2). As such, the claim is not limited to statutory subject matter and is therefore non-statutory. To overcome this type of 101 rejection the claims need to be amended to include only the physical computer media and not a transmission media or other intangible or non-functional media.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. **Claims 1 – 11, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,913,061 to Gupta et al. [hereinafter referred to as Gupta, cited in the previous office action] in view of U.S. Patent No. 6,704,785 to Koo et al. [hereinafter referred to as Koo].**

10. As to claim 1, Gupta teaches the invention substantially as claimed including a method of exchanging information among applications, the method comprising:

providing a plurality of transformers [30 Fig. 1], each transformer corresponding to a unique transformation from one format into another [col. 4 lines 7-32];

using a first transformer to transform a data object from a format understandable by a first application into a common format data object [105 Fig. 2 and col. 5 lines 22-24];

publishing the common format data object to a communication channel [105 Fig. 2 and col. 5 lines 24-25];

subscribing to the communication channel to retrieve the published common format data object [102 Fig. 2 and col. 5 lines 25-30]; and

using a second transformer to transform the common format data object into a format understandable by a second application [110 Fig. 2 and col. 5 lines 34-39].

11. Although Gupta teaches the invention substantially, Gupta does not specifically disclose publishing data object to a selected communication channel.

However, Koo teaches architecture for event-driven communications based on events services [col. 4, lines 15 – 35], channel factory objects for creating and naming

new channel objects which establish the various interfaces and allocate the resources used to implement the publish-subscribe architecture [col. 6, lines 16 – 32], publish data objects to a selected communication channel [col. 4, lines 23 – 35; each time an event service is set up, a separate basic channel is also created for providing status data to publishers and subscribers to channels utilizing channel factories at that event service, col. 6, lines 25 – 33].

12. It would have been obvious to a person of ordinary skilled in the art at the time of the invention to apply the teaching of publishing data object to a selected communication channel as taught by Koo to the invention of Gupta because connecting a large number of subscribers to a channel causes line loading and slows the transfer of data drastically and ultimately render the channel inoperative [col. 5, lines 1 – 6 of Koo]. Publishing data object to a selected communication channels allows channels to be administer in an efficient and economic manner [col. 4, lines 65 – 67 Koo] and a channel factory object may provide a channel capable of allocating resources for providing storage and other facilities to allow retention policies to be implemented by which various levels of service ranging from a basic "best efforts" service through various levels of "guaranteed delivery" may be offered [col. 6, lines 33 – 46 of Koo].

13. As to claim 2, Gupta teaches the data object corresponds to one or more of a plurality of business events [col. 5 lines 10-17].

14. As to claim 3, Gupta as modified teaches using the first transformer to transform the data object from the format understandable by the first application into the common format data object comprises translating the data object from a vendor-specific format associated with the first application to an Interface Data Language (IDL) object and storing the IDL object in a shared object model [col. 5, lines 17 – 20 and col. 12, lines 45 – 66 of Koo].

15. As to claim 4, Gupta as modified teaches the shared object model comprises a central repository [log of data 45, Fig. 3; col. 7, lines 27 – 57 of Koo] of data objects corresponding to business events [col. 4, lines 51 – 61 of Koo].

16. As to claim 5, Gupta teaches using a first transformer to transform the data object from the format understandable by the first application into the common format data object is performed in response to a recognition of a business event by the first application [col. 5, lines 10-17].

17. As to claim 6, Gupta teaches that the method is performed in accordance with a plurality of process models that collectively define when information is to be exchanged among applications [rules engine col. 7, lines 46-58].

18. As to claim 7, Gupta teaches publishing the common data format object to a communications channel is performed by a source connector and subscribing to the

communication channel is performed by a target connector [first application is the source and the second application is the target; col. 5 lines 31-39].

19. As to claim 8, Gupta as modified teaches publishing the common format data object to a communication channel is performed in accordance with a channel architecture that defines a plurality of communication channels having relative priorities [channels may be generated as "reliable channels" and as "guaranteed channels" in order to carry this out; col. 6, lines 33 – 46 of Koo].

20. As to claim 9, Gupta as modified teaches using the second transformer to transform the common format data object into the format understandable by the second application comprises retrieving a stored Interface Data Language (IDL) format object from a central repository and translating the IDL object into a vendor-specific format associated with the second application [col. 5, lines 17 – 20 and col. 12, lines 45 – 66 of Koo].

21. As to claim 10, Gupta teaches information is exchanged among business support systems or operational support systems or a combination thereof [col. 4 lines 61-65].

22. As to claim 11, Gupta teaches at least one of the transformers comprises a class defined in an object-oriented programming language [implied by "object-oriented interface" col. 4 lines 9 – 10].

23. As to claim 16, Gupta teaches an acknowledgement class to exchange status messages among applications ["saga" col. 8 lines 31-49].

24. As to claim 17, Gupta teaches using the acknowledgement class to perform exception handling [col. 9 line 58 - col. 10 line 8].

25. **Claims 12 – 15 and 18 – 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta and Koo further in view of U.S. Patent No. 6,549,956 to Bass et al. [hereinafter referred to as Bass].**

26. As to claim 12, Gupta as modified teaches message routing [col. 7, lines 55 – 58 of Gupta] but does not specifically disclose a controller that is configured to route data objects to an associated transformer.

However, Bass teaches a publication/subscription server [col. 3, lines 5 – 21] including a plurality of transformers each transformer corresponding to a unique transformation from one format into another [col. 3, lines 36 – 50 and 60 – 65; col. 7, lines 40 – 65; col. 9, lines 36 – 42], and a controller that is configured to route data objects to an associated transformer [brokers route published events to interested subscribers; col. 5, lines 9 – 15].

27. It would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of a controller that is configured to route data objects

to an associated transformer as taught by Bass to the invention of Gupta as modified because this does not require the subscribing and sending processes to have any knowledge of each other and provides anonymous publication and reception of data [col. 1, lines 30 – 33 of Bass].

28. As to claim 13, Gupta as modified teaches routing a data object to the first transformer using a first controller [the event to the broker 16, which republishes the event to subscribing process adapter 18 within domain 112; col. 4, lines 43 – 56 of Bass].

29. As to claim 14, Gupta as modified teaches routing the common format data object to the second transformer using a second controller [thread receive events from the adapter framework interface 20 via a specific callback issued by the broker in response to a subscription 321; col. 7, lines 12 – 40 of Bass].

30. As to claim 15, Gupta as modified teaches at least one of the controllers comprises a class defined in an object-oriented programming language [col. 3, lines 50 – 67 of Bass].

31. As to claim 18, Gupta as modified teaches facilitating the exchange of information among applications, the method comprising:

receiving a data object from a first application [application collaboration module receives notice of an event; col. 8, lines 50 – 65 of Gupta];

using a first controller to route the received data object to a first transformer [the event to the broker 16, which republishes the event to subscribing process adapter 18 within domain 112; col. 4, lines 43 – 56 of Bass];

using the first transformer to transform the data object from a first format used by the first application into a common format object [105 Fig. 2 and col. 5 lines 22-24 of Gupta];

publishing the common format object to a communication channel [col. 4, lines 23 – 35; each time an event service is set up, a separate basic channel is also created for providing status data to publishers and subscribers to channels utilizing channel factories at that event service, col. 6, lines 25 – 33 of Koo];

receiving a request from a subscribing application to subscribe to the communication channel [102 Fig. 2 and col. 5 lines 25-30 of Kupta];

using a second controller to route the common format object to a second transformer [thread receive events from the adapter framework interface 20 via a specific callback issued by the broker in response to a subscription 321; col. 7, lines 12 – 40 of Bass];

using the second transformer to transform the common format object into a data object in a second format used by the subscribing application [110 Fig. 2 and col. 5 lines 34-39 of Gupta]; and

sending the data object in the second format to the subscribing application [publication service delivers an object associated with the event notification to each object in the subscription list requesting notification of the particular event (408); col. 7, lines 19 – 30 of Gupta].

32. As to claims 19 – 23 and 25 – 27, these are similar in scope to claims 2 – 6 and 8 – 10; therefore, these claims are rejected for the same reasons as claims 2 – 6 and 8 – 10 above.

33. As to claim 24, Gupta as modified teaches if requests are received from a plurality of subscribing applications, then, for each subscribing application, the common format object is transformed using an associated transformer into a format corresponding to the subscribing application and sent to the subscribing application [corresponding application connector provides a representation of the employee in the interchange server's object model. It is the responsibility of the connector to detect and keep track of changes in the application, and if necessary issue events; col. 17, lines 13 – 60 of Gupta].

34. As to claim 28, Gupta as modified teaches a system for facilitating the exchange of information among applications, the system comprising:

a plurality of process models each defining one or more conditions for sending a business event [col. 5 lines 10-17 of Gupta] from an application to one or more other applications [rules engine col. 7, lines 46-58 of Gupta];

a shared object model configured to store data objects received from applications in a common format [col. 5, lines 17 – 20 and col. 12, lines 45 – 66 of Koo];

a plurality of transformer classes configured to translate data object from a format used by one or more applications into the common format [105 Fig. 2 and col. 5 lines 22-24 of Gupta] or vice versa [110 Fig. 2 and col. 5 lines 34-39 of Gupta]; and

a plurality of controller classes configured to route data objects to associated transformer classes [brokers route published events to interested subscribers; col. 5, lines 9 – 15 of Bass].

35. As to claim 29, Gupta as modified teaches a channel architecture defining a plurality of communication channels to which data objects from an application are to be published [channel factory objects for creating and naming new channel objects which establish the various interfaces and allocate the resources used to implement the publish-subscribe architecture; col. 6, lines 16 – 32 of Koo].

36. As to claims 30 – 32, these are similar in scope to claims 8, 16 and 17; therefore, these claims are rejected for the same reasons as claims 8, 16 and 17 above.

37. As to claim 33, Gupta as modified teaches each process model corresponds to a different business event [rules engine col. 7, lines 46-58 of Gupta].

38. As to claim 34, Gupta as modified teaches the shared object model comprises a central repository of data objects in an Interface Description Language (IDL) format [col. 5, lines 17 – 20 and col. 12, lines 45 – 66 of Koo].

39. As to claim 35, Gupta as modified teaches each transformer class corresponds to a unique application format-common format translation [col. 4 lines 7-32 of Gupta].

40. As to claim 36, Gupta as modified teaches each controller class is configured to route data objects to an associated transformer class according to a process model [col. 5, lines 9 – 15 of Bass].

41. As to claim 37, this is similar in scope to the combination of claims 11 and 15; therefore, this claim is rejected for the same reasons as claims 11 and 15 above.

42. As to claim 38, this is similar in scope to claim 18; therefore, this claim is rejected for the same reasons as claim 18 above.

43. As to claim 39, Gupta as modified teaches the machine-readable instructions comprise computer software instructions executable by one or more computer systems [col. 10, lines 17 – 38 of Bass].

44. As to claims 40 – 48, these are similar in scope to claims 19 – 27; therefore, these claims are rejected for the same reasons as claims 19 – 27 above.

Conclusion

45. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,405,266 to Bass et al. teaches handling messages published between entities whether they are in the same process or they are in different processes.

46. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (571) 272-3768. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Li B. Zhen
Examiner
Art Unit 2194

lbz

ST. JOHN COURTENAY III
PRIMARY EXAMINER